

0.136). The various methods, including direct calculation, Bayes' theorem, Fagan's nomogram and conversion to odds, for the correct derivation of post-test likelihoods are all excellently presented in the recent series of clinical epidemiology rounds.

I believe I understand how the inaccuracy occurred. Dr. Morgan began with a pretest probability of 0.05 and converted this to pretest odds. If one uses the formulas given in the relevant McMaster article (129: 947-954) one obtains pretest odds of 0.0526. One then multiplies the pretest odds by 3 to obtain the post-test odds (0.158). Please note that one has now obtained the post-test odds, not the post-test probability. Once one has obtained the post-test odds one must reconvert from odds back to probability. The formula is: post-test probability = post-test odds/(post-test odds + 1). Thus, one would compute $0.158/1.158 = 0.136$. It is unfortunate that one has to go through the process of converting to odds, multiplying by the likelihood ratio and then reconvert back to probability; however, the nomograms and tables supplied by the McMaster group make this a much easier task.

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1. Department of Clinical Epidemiology and Biostatistics, McMaster University, Hamilton, Ont: Interpretation of diagnostic data [six parts]. *Can Med Assoc J* 1983; 129: 429-432, 559-564, 587, 705-710, 832-835, 947-954, 1093-1099

Cervical spine injuries in rugby players

I read with interest the paper by Dr. Olli M. Sovio and colleagues (*Can Med Assoc J* 1984; 130: 735-736) on cervical spine injuries in rugby players in British Columbia. The authors call for changes in the laws governing the game as well as for increased awareness of the danger-

ous aspects of rugby in order to reduce the incidence of injuries.

The British Rugby Football Union has made changes in the interpretation of laws for players under 19 years of age, effective Sept. 1, 1983.¹ One change states that "any player at any stage in the scrum, ruck or maul who has, or causes an opponent to have, his shoulders lower than his hip joint must immediately be penalized by awarding a free kick. The object of this interpretation is to try to prevent a collapse of the scrum, ruck or maul." As well, law 19 (lying with, on or near the ball) states: "A player or players from either team must not willfully fall on or over a player who is lying on the ground with the ball in his possession, or on players lying on the ground with the ball between them. A penalty kick will be awarded at the place of infringement."

The Canadian Rugby Football Union, through its Referee and Laws Subcommittee, has carried this impetus even further. Not only have these changes been in effect since Sept. 1, 1983 in British Columbia and since Jan. 1, 1984 in the rest of Canada, but a new high-tackle law was also introduced to prevent players from being tackled above the level of the shoulders, including being pulled down by the jersey collar. This law should have the effect of reducing the number of cervical spine injuries occurring as a result of excessive rotational force being placed on the neck. Furthermore, these new laws apply to all levels of rugby in Canada, including the higher-risk group of senior players.

It remains to be determined whether these changes will result in fewer serious cervical spine injuries among Canadian rugby players. One would hope that with the present awareness of potential dangers, rugby can still be played with the true spirit of the game intact.

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1. BEER I: A safer game. *Rugby Post: Official Rugby Football Union Magazine*, 1983; Oct: 21-23

Air Canada's "honorary flight surgeon"

Dr. Linda G. Curtis (*Can Med Assoc J* 1984; 131: 98) writes of the appreciation expressed by Air Canada when she assisted a patient in distress on a flight.

Unfortunately, I had an experience that was quite dissimilar. On a flight from Montreal to Vancouver I assisted a passenger who had an acute asthma attack. However, I was not thanked profusely by the captain, nor did I receive a bottle of champagne, and, needless to say, I haven't become an honorary flight surgeon.

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Marital therapy for the elderly

I read with interest the article by Dr. Stanley Goldstein and Judith Preston on marital therapy for the elderly (*Can Med Assoc J* 1984; 130: 1551-1553). Unfortunately, patterns leading to marital disintegration can and do happen at any stage in the marriage. The overriding factor among the elderly, suggested in the article, is that when one reaches a certain age society limits various options and opportunities, disposing of, rather than revering, its elderly.

If society chooses to close the doors on the elderly it will pay the price of losing a valuable resource. One must look closely at a system that discards people when it seemingly has no more use for them. Such was the case against Socrates, who, at the age of 70, was still instructing the youth of Athens to challenge the status quo. He lost his life but upheld his philosophical beliefs against a nihilistic society. Not much is known about his wife, Xanthippe. Oral tradition has it, however, that Socrates drank the hemlock not to uphold his beliefs but because he was worried about the future of his marriage now that he was forced into early retirement.

Goldstein and Preston conclude